

Cellphone Masts Damaging our Brains?

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By: **Sheree Bega**

The ultimatum from the teachers at Eldorado Park Senior Secondary School in Johannesburg was clear: either the planned cellphone mast went, or they did. For Lionel Billings, it wasn't a hard decision to make.

"I thought that I could rather lose the mast but not the teachers," says Billings, the chairperson of the school governing body. "My kids also attend the same school."

The school entered into a contract with Cell C more than two years ago and a mast would provide a guaranteed income. "The thought of radiation was in the back of my mind... but some of the schools in the area do have these towers and I thought it can't be that bad."

But when construction started towards the end of last year, everything changed. "The teachers told me if the mast went up, they would leave. They had done their research and were concerned about the dangers of cellphone masts.

"Some of the research was very inconclusive, but the bottom line was that the word radiation was mentioned in every article. That was enough for them to say we do not need this at our school. I do not want to put our school's 1 600 learners and 50 teachers at any risk. We don't even allow cellphones at the school."

Tracey-Lee Dorny, the chairperson of the Electromagnetic Radiation Research Foundation of SA, applauds the school's move, noting that a village in Spain has just removed a cellphone mast after 50 villagers contracted cancer or suffered from headaches, insomnia and depression.

Too many schools in SA allow the erection of cellphone masts on their grounds, says Dorny, despite "burgeoning" scientific evidence about the potential health effects of electromagnetic fields emitted by cellular base stations.

"There are thousands of papers showing possible links to cancer, and now increasing incidents of attention-deficit disorder, Alzheimer's and diabetes from cellphone radiation," she says.

"When I give talks to schools, the first thing I ask is who is sleeping with their cellphones under their pillows. Almost all the hands go up. You find our children hiding their cellphones on their bodies so that they don't miss an SMS while their poor little breasts are being fried.

"I teach the children how dangerous phones are and not to put them in their bras or panties, sleep with them under their pillows and walk with them in their pockets."

Like most South Africans, Dorny, an event's organiser, was using her cellphone regularly two years ago. But when she and her family, who live in the upmarket suburb of Craigavon, Johannesburg, started to fall ill, they looked at the iBurst mast just metres from their home.

"I was actually using iBurst," recalls Dorny. "But I ended up starting to vomit until I brought up blood. I had a rash from head to toe. It felt like my eyes were melting in my head. My husband had bleeding headaches. My son would wake up screaming in the middle of the night holding his head, which he said felt like a rocket had gone off."

Dorny says the effects were so severe that the family could not live in their home for 18 months. Eventually, iBurst dismantled the mast, which had been illegally erected, but its former chief executive maintained it had been switched off for weeks at a time and denied it could be the cause of similar illnesses affecting scores of residents in the suburb.

Dorny believes she has another battle on her hands. She says MTN's testing of 4G LTE (long term evolution) is "scorching" trees in her garden and the surrounding area, and is the source of growing reports of illnesses, including tinnitus, headaches, shooting pains, nausea and dizziness, in the suburbs where it is being conducted.

4G is the fourth generation of wireless communication standard for an era of ultra-fast broadband internet access.

"People ask me if we've had a fire here," says Dorny, pointing to a cluster of some of the 60 burnt and blistered pine trees in her garden – she has numbered each one.

She says 4G has higher penetration levels into buildings, and "therefore into our bodies". "My big concern is that we've got so many service providers rolling out waves and levels of radiation... but they are actually clueless about the damage they are causing... The only reason we have 4G is purely to now flog a whole generation of gadgets to the public. What sort of powers and frequencies are being transmitted to do this and what is it doing to people?"

But Dr Walter Meyer, a senior lecturer in the physics department at the University of Pretoria, disagrees. "In principle, electromagnetic radiation can cause heating effects. The best example is the microwave oven, but the kind of effect to scorch a tree would imply a serious health hazard to people.

"You actually start heating people up, cooking them. It's certainly possible... but the power output of such a transmitter would be much higher than that which is used for cellphone communication. I doubt whether this scorching is due to cellphone radiation. To have those kinds of thermal effects you should in principle feel the heat."

Ivan Booth, a former Vodacom spokesperson, lashed out at Dorny's "pseudo-science".

"I'm willing to put a R1 million bounty out there to anyone who can prove that cellular base stations scorch pine trees," he wrote.

But Dorny says several studies point to the deterioration of trees around masts. "I'm not an alarmist. I wish I could shout louder. What's happening now with the mass of towers and all the different layers of technology on top of each other is you're being exposed to electromagnetic radiation 24/7. You're not having a choice of 'I don't want this coming into my home, it's making me ill'. You can't switch it off like you can your cellphone."

SA is guided by the World Health Organisation (WHO) and the exposure guidelines published by the International Commission on Non-Ionising Radiation Protection (ICNIRP). SA authorities say that there is no risk to the health of the general public from exposure to the microwave emissions of cellular base stations, for example.

Barrie Trower, a military scientist from the UK, on a visit to King Kgafela II of the Bakgatla tribe in Botswana, notes how there are at least 11 international committees that "vehemently" oppose both the WHO's and ICNIRP's safety levels.

“This is mostly due to the former’s safety levels being based... on thermal levels, whereas other international studies recognise responses to electrochemical interactions between microwaves and cellular biochemistry and set safety levels according to lower rates.”

The king had invited Trower to speak because he blamed the death of his father from a brain tumour on a cellphone mast erected near the royal residence.

Last May, the International Agency for Research on Cancer and the WHO reclassified radio frequency electromagnetic fields as a Class 2B carcinogen – possibly carcinogenic to humans – because of links to some types of brain cancer.

“But this has been ignored by the industry,” says Dorny. “They will keep quoting the ICNIRP. But those guidelines have been declared obsolete by several governments, because it’s only based on six minutes of thermal heating on an adult male... not one organisation has yet declared what they feel is a safe level for children... We’re sitting in 2012 with masses of new technology and huge cellphone use.”

Late last year, a Danish study, billed as the largest of its kind, found that there were no increased risks of brain cancer from cellphone use after tracking 350 000 users for 18 years.

SA, says Dorny, should err on the side of caution and follow the example of Sweden, Canada, France and Switzerland, which have adopted safer radiation limits for their citizens and even prevented wireless fidelity (Wi-Fi) in schools.

She accuses government departments of shifting the blame and leaving SA’s cellphone industry “unregulated” and uncontrolled.

The departments of Health, Environmental Affairs and Communications and the Independent Communications Authority of SA failed to respond to the IOS’s queries.

Last year, Olle Johansson, an associate professor at the department of neuroscience at the Karolinska Institute in Sweden, and a scientific adviser to Dorny’s foundation, wrote an impassioned plea to the SA government. He said several studies had demonstrated “cellular DNA damage, disruptions and alterations” because of exposure to electromagnetic fields.

The ICNIRP/WHO public safety limits were inadequate and obsolete with respect to prolonged, low-intensity exposures, he said, and the precautionary principle should be in force in the implementation of this new technology, especially when it came to the exposure of children.

Dorny says her exposure to the iBurst mast made her electro sensitive, which means she becomes ill when exposed to electromagnetic radiation. She wears specially made nets to shield her from radiation at home and when she travels. According to her foundation, 3 percent of the world’s citizens are electro sensitive, and the number is surging.

Dorny is not averse to the use of technology but says that a properly planned fibre-optic network, “from backbone to final source”, is safer if broadband is to be expanded.

She even owns a cellphone. “It’s an ancient thing but I only use it for emergencies. It’s never on. I used to use my phone quite avidly. But I don’t feel well when I do use one. If I have to pick up a smartphone, it actually burns my hand.”

She adds: “Anything... that is going to make you sick is of concern. If it’s going to give you rashes, make you vomit, give you blurry vision, memory loss... that either happens till the signal goes down or you take yourself away.” - Saturday Star